

ANALYST:		VPDES NO.	
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Instrument: _____

Parameter: Total Residual Chlorine (TRC)

Method: DPD Colorimetric (LaMotte)

1/08

METHOD OF ANALYSIS:

LaMotte Manufacturer's Instructions (Method 7916) plus an edition of *Standard Methods*

	18 th Edition of <i>Standard Methods</i> 4500-Cl G
	21 st Edition of <i>Standard Methods</i> 4500-Cl G (00)

	Y	N
1) Is a certificate of operator competence or initial demonstration of capability available for <u>each analyst/operator</u> performing this analysis? NOTE: Analyze 4 samples of known TRC. Must use a lot number or source that is different from that used to prepare calibration standards. May not use Spec Checks TM . [SM 1020 B.1]		
2) Are only DPD Instrument Grade tablets used? (Rapid Dissolve Grade tablets and liquid DPD cannot be used with meters) [Mfr.]		
3) Are the LaMotte DPD # 1 & # 3 (# 4 may be used in place of # 1 & # 3) tablets stored in a cool, dry place and within manufacturer's expiration date? [7.3.1 and 7.3.2]		
4) Has an initial calibration curve been established using a blank and five standards ranging from 0.1 to 4.0 mg/L chlorine with a calibration coefficient ≥ 0.995 ? [10.1]		
5) If instrument is calibrated on-site, is a standard from another source used to verify the curve each day of use with recovery of 90 – 110%? [10.1; 18 th ed 1020 B.5; 21 st ed 4020 B.2.b]		
6) If using the factory installed calibration (1100 & 1200 colorimeters), is the curve verified each day of use using a high and a low standard with recovery of 90 – 110%? NOTE: May use commercially available chlorine standards for daily calibration verifications. [9.3.4; 18 th ed 1020 B.5; 21 st ed 4020 B.2.b]		
7) If the factory installed calibration curve is adjusted by the analyst, is the adjusted curve verified using a blank and three standards? [18 th ed 1020 B.5; 21 st ed 4020 B.2.b]		
8) Does the cell used have a light path of at least 1 cm? [11.1]		
9) Is the spectrophotometer set at 515 nm, or the filter photometer set from 490-520 nm? [11.6]		
10) Is the wastewater sample being analyzed used to zero the meter? [11.1]		
11) Is the light shield closed when the meter is zeroed and when the sample is analyzed? [Mfr.]		
12) Is the 10 mL aliquot of sample measured in a graduated cylinder? [11.3]		
13) Are both DPD tablets #1 and #3 (or #4) crushed after a <u>small amount</u> of sample from the graduated cylinder is added to the cell? [11.3]		
14) After crushing the tablets, is cell filled with remainder of 10 mL aliquot of sample and mixed? [11.5]		
15) Are results measured within 10 to 30 seconds after DPD tablets dissolve? [11.6]		
16) If read-out is greater than 4.0 mg/L, is sample diluted correctly and then reanalyzed? [11.6]		
17) Are samples analyzed within 15 minutes of collection? [40 CFR Part 136]		
18) Is a duplicate sample analyzed after every 20 samples if citing 18 th or 19 th Edition [SM 1020 B.6] or daily for 20 th or 21 st Edition [SM 4020 B.3.c]?		
19) If duplicate samples are analyzed is the relative percent difference (RPD) ≤ 20 ? [18 th ed. Table 1020 I; 21 st ed. DEQ]		

PROBLEMS:

TRC LaMotte